EE10 Series

HVAC Humidity and Temperature Transmitter for Indoor Applications

EE10 room transmitters are the ideal solution for indoor applications such as HVAC in residential and official buildings.
The very stylish, functional housing makes easy installation and fast exchange of the sensing unit for service purposes possible. The high quality E+E humidity sensor and state-of-the-art microprocessor controlled electronics are the guarantee for best accuracy and a wide range of options.
The standard humidity output of EE10 transmitters is 4 - 20 mA or 0 - 10 V. The temperature output signal can be active or passive.
All EE10 versions can be equipped with a good legible LCD display. For EE10-FT versions the displayed values for humidity and temperature will alternate.

EE10

Typical Applications

building management for residential and office areas
air conditioning
switching cabinets
climate control in hotels and museums

Features

excellent price / performance ratio
easiest installation
modern design
long term stable
optional display

Technical Data

Measuring Quantities

Relative Humidity

Humidity sensor	HC103	
Analogue output 0...100 %r.H.	0-10 V	-1 mA < I_L < 1mA
	4-20 mA (two wires)	R_L < (U_v-10)/0.02 < 500 Ohm
Working range[1]	0...95 %r.H.	
Accuracy at 20 degC and U_v=24VDC	±2 %r.H. (40...60%r.H.)	±3 %r.H. (10...90 %r.H.)
Temperature influence at 60%r.H.	typical 0.06 %r.H. / degC	

Temperature (active output)

Analogue output 0...50 degC[2]	0-10 V	-1 mA < I_L < 1mA
	4-20 mA (two wires)	R_L < (U_v-10)/0.02 < 500 Ohm
Accuracy at 20 degC and U_v=24VDC	±0.25 degC (FT3)	±0.4 degC (FT6)

Temperature (passive output)

Type of T-Sensor	please see ordering guide

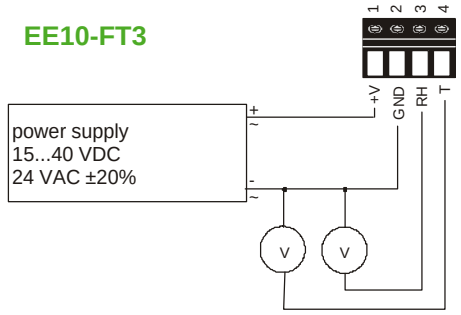
General Data

Voltage supply (U_v)		
for 0 - 10 V	15 - 40 VDC or 24 VAC ±20%	
for 4 - 20 mA	28V > U_v > 10 + 0.02 x R_L	(R_L < 500 Ohm)
Current consumption	for DC supply:	typical 4 mA
	for AC supply:	typical 15 mA_{eff}
Electrical connection	Screw terminals max. 1.5 mm^2	
Display	for EE10-FTx version	Humidity / Temperature alternating
	for EE10-Fx and EE10-FPx version	Humidity
CE compatibility according	EN 50081-1	
	EN 50082-1	
Temperature ranges	Working temperature range:	-5...+55 degC
	Working temperature with display:	-5...+55 degC
	Storage temperature range:	-25...+60 degC

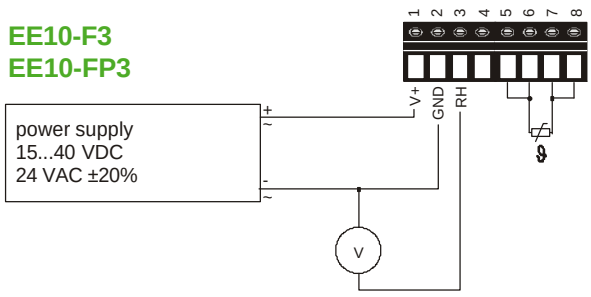
1) Please refer to the working range of the HC103!
2) Other scalings possible upon request

Connection Diagram

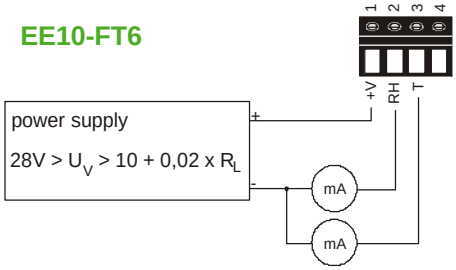
EE10-FT3



EE10-F3
EE10-FP3

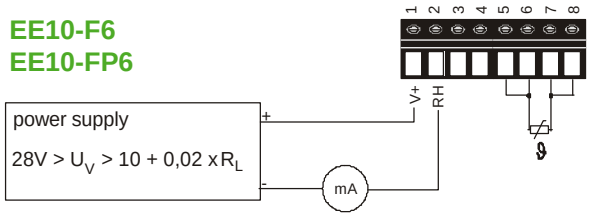


EE10-FT6



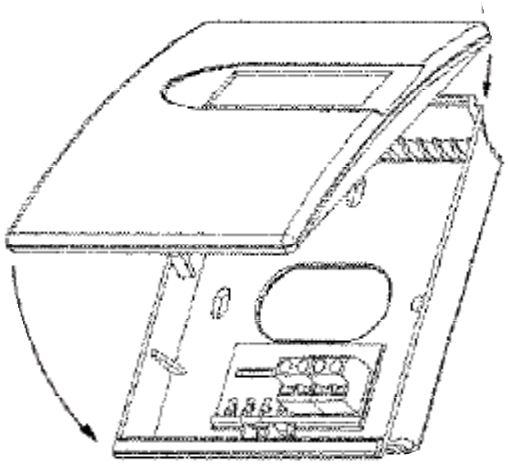
R_L < 500 Ohm

EE10-F6
EE10-FP6



R_L < 500 Ohm

Dimensions (mm)



W x H x D = 85 x 100 x 26

Housing: PC
Protection class: IP20

Housing colour: Cover: RAL 9003 (signal white)
Back: RAL 7035 (light grey)

(other colours upon request)

Order Example

EE10-FP6D-D04

Model:	Humidity + Temperature Transmitter with passive T-output
Output humidity:	4-20mA
Output temperature:	Pt 1000 DIN B
Display:	with Display
Display:	%RH

Ordering Guide

MODEL	OUTPUT	T-SENSOR (only passive)	T-SCALE (only for FT)	DISPLAY	T - UNIT (only for (D04))
humidity + temperature (FT) humidity (F) humidity + temperature passive (FP)	0-10V (3) 4-20 mA (6)	Pt 100 DIN A (A) Pt 100 DIN B (B) Pt 1000 DIN A (C) Pt 1000 DIN B (D)	standard (0...50degC) (--) other (Txx)	without display (--) with display (D04)	°C (--) °F (EE01)
EE10-					

EE16 Series

Humidity / Temperature Transmitter for HVAC Applications

EE16 transmitters are the ideal solution for accurate measurement of relative humidity and temperature at a reasonable price in HVAC applications. The appropriate filter cap enables employment in heavily polluted environment.

The new developed E+E humidity sensors HC101 guarantee excellent long term stability and resistance against chemical pollutants. Their excellent reproducibility allows a simple low-cost-one-point calibration for very good accuracy over the entire working range.

EE16 transmitters are available as wall or duct mounted, with current or voltage output signals.

EE16

Typical Applications

building-automation
storage rooms
climate and ventilation control

Features

excellent price/performance ratio
wettable
long term stable

Technical Data

Measuring values

Relative Humidity

Sensor	HC101	
Output appropriate 0...100% RH	0-10 V	-1 mA < I_L < 1 mA
	4-20 mA (two wire)	R_L < 500 Ohm
Working range[1)]	10...95% RH	
Accuracy at 20 degC	±3% RH	
Temperature dependence at 45% RH	typ. -0.05% RH/degC	

Temperature

Sensor	Pt1000 (class A, DIN EN 60751)	
Output appropriate 0...50 degC	0-10 V	-1 mA < I_L < 1 mA
	4-20 mA (two wire)	R_L < 500 Ohm
Accuracy at 20 degC	±0.5 degC	

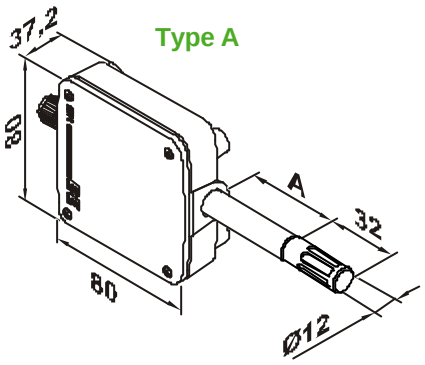
General

Supply voltage		
for 0 - 10 V	15 - 35V DC or 24V AC ±20%	
for 4 - 20 mA	10V + R_L x 20 mA < Uv < 35V DC	
Current consumption	for DC supply	typ. 8 mA
	for AC supply	typ. 20 mA_{eff}
Electrical connection	screw terminals max. 1.5 mm^2	
Housing / protection class	Polycarbonat / IP65	
Cable gland	M16	
Sensor protection	membrane filter, sintered bronze filter or metal grid filter	
Electromagnetic compatibility	EN 61000-6-1	EN 61326-1+A1+A2
	EN 61000-6-3	
Temperature range	working temperature:	-5...+50 degC
	storage temperature:	-25...+60 degC

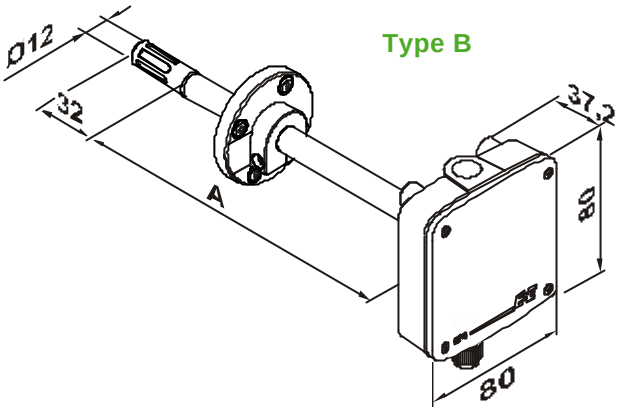
1) Refer to the working range of the humidity sensor HC101!

Housing Dimensions (mm)

Type A

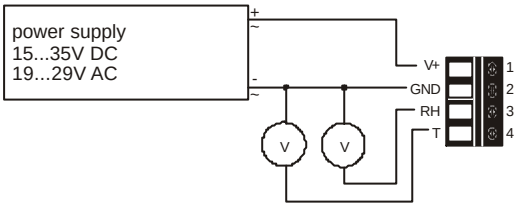


Type B

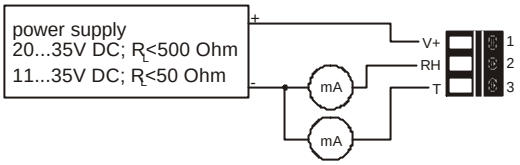


Connection Diagram

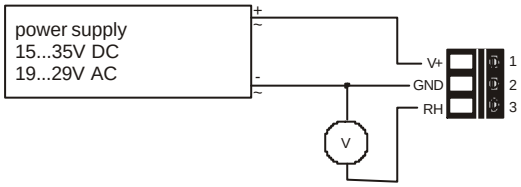
EE16-FT3xxx



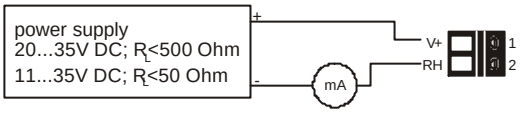
EE16-FT6xxx



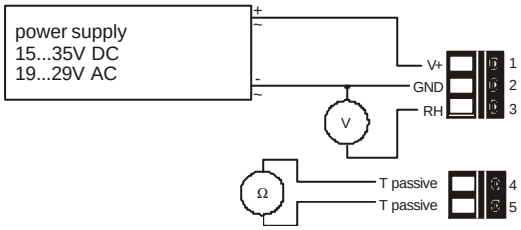
EE16-F3xxx



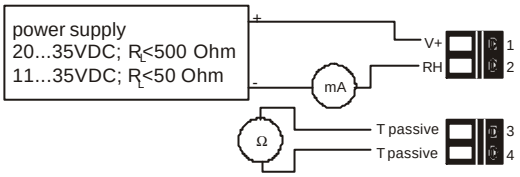
EE16-F6xxx



EE16-FP3xxx



EE16-FP6xxx



Ordering Guide

MODEL	OUTPUT	T-Sensor (only model FP)	HOUSING	PROBE LENGHT (according to "A")	FILTER
humidity + temperature (FT)	0-10V (3)	Pt 100 DIN A (A)	wall mounting (A)	50 mm (2)	membrane filter (1)
humidity (F)	4-20 mA (6)	Pt 100 DIN B (B)	duct mounting (B)	200 mm (5)	sintered bronze filter (2)
humidity + temperature passive (FP)		Pt 1000 DIN A (C)			metal grid (6)
		Pt 1000 DIN B (D)			
		others on request			
EE16-					

Order Example

EE16-F3A21

model:	humidity transmitter
output:	0-10V
housing:	wall mounting
probe lenght:	50 mm
filter:	membrane filter